GULF OF THE FARALLONES NATIONAL MARINE SANCTUARY







FINAL MANAGEMENT PLAN

PREPARED AS PART OF THE JOINT MANAGEMENT PLAN REVIEW (JMPR)

VOLUME II OF IV

OCTOBER 2008

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
NATIONAL MARINE SANCTUARY PROGRAM







GULF OF THE FARALLONES NATIONAL MARINE SANCTUARY MANAGEMENT PLAN







The Gulf of the Farallones National Marine Sanctuary (GFNMS) Management Plan represents the outcome of a multi-year community-based process. The issue areas and programs addressed in this document were built with guidance from the general public, sanctuary staff, agency representatives, experts in the field and the sanctuary advisory council. We would like to give special thanks to the members of the sanctuary advisory council who collectively dedicated over 2,800 hours of volunteer time to this effort. Bob Breen, Richard Charter, Brenda Donald, Mark Dowie, Barbara Emley, Peter Grenell, Gwen Heistand, Jim Kelley, Mick Menigoz, Don Neubacher, Brian O'Neill, Karen Reyna and Bob Wilson – your contribution of time and input into the completion of this Final Management Plan cannot be overstated.

Please direct all questions or comments concerning this management plan to:

Maria Brown, Superintendent
Gulf of the Farallones National Marine Sanctuary
991 Marine Drive, The Presidio
San Francisco, CA 94129
(415) 561-6622
Maria.Brown@noaa.gov

For readers that would like to learn more about the management plan, GFNMS policies and community-based management processes, we encourage you to visit our website at www.farallones.noaa.gov. Readers who do not have Internet access may call the Sanctuary office at (415) 561-6622 to request relevant documents or further information.

The National Oceanic and Atmospheric Administration's (NOAA) National Marine Sanctuary Program seeks to increase public awareness of America's ocean and Great Lakes treasures by conducting scientific research, monitoring, exploration and educational programs. Today, the program manages thirteen national marine sanctuaries and one coral reef ecosystem reserve that together encompass more than 150,000 square miles of America's ocean and Great Lakes natural and cultural resources.

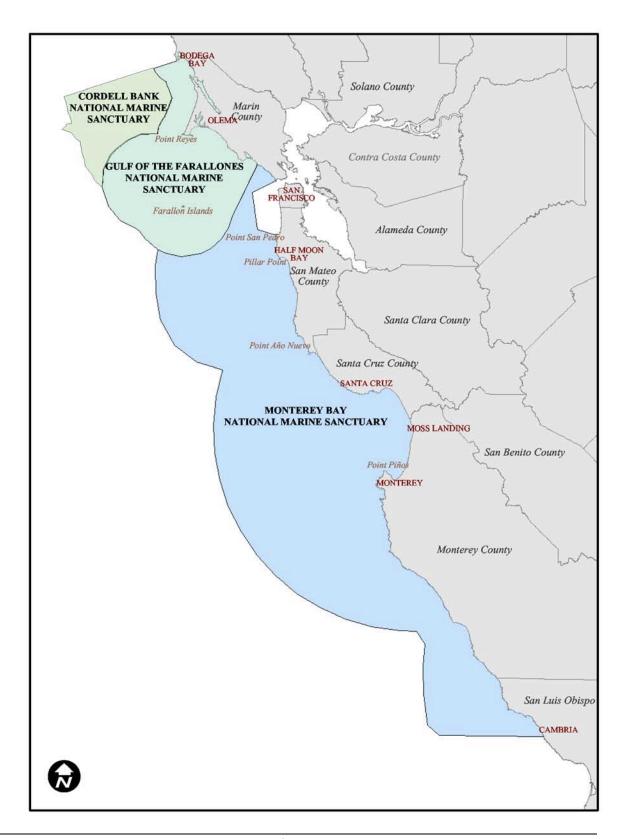
The NOAA Ocean Service manages the sanctuary program and is dedicated to exploring, understanding, conserving and restoring the nation's coasts and oceans and works to balance environmental protection with economic prosperity in its mission promoting safe navigation, supporting coastal communities, sustaining coastal habitats and mitigating coastal hazards.

NOAA, an agency of the U.S. Commerce Department, is dedicated to enhancing economic security and national safety through the prediction and research of weather and climate-related events and providing environmental stewardship of our nation's coastal and marine resources.

Cover Photo Credits:

Tufted Puffin (*Fratercula cirrhata*) –Jeff Foott Blue Whale (*Balaenoptera musculus*) –Thomas M. Johnson White Shark (*Carcharodon carcharias*) – Scot Anderson

JOINT MANAGEMENT PLAN REVIEW STUDY AREA MAP



GULF OF THE FARALLONES NATIONAL MARINE SANCTUARY MAP

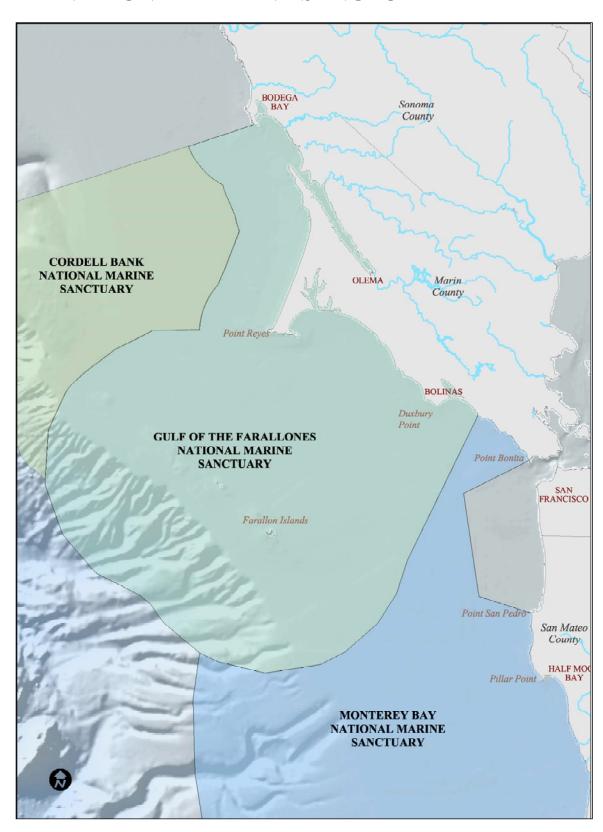


TABLE OF CONTENTS

Joint Management Plan Review Study Area Map	<i>i</i>
Gulf of the Farallones National Marine Sanctuary Map	ii
Executive Summary	1
Introduction	5
Sanctuary Setting	
Overview of Joint Management Plan Review (JMPR) Process	
Structure of the Action Plans	
Issue-Based Action Plans	
Water Quality	47
Water Quality Map	
Tomales Bay Water Quality and Mariculture Map	
Land Cover Map	65
Timeline	
Budget	
Performance Measures	69
Wildlife Disturbance	71
Coastal Access Points and Shoreline Types Map	83
Overflight Restriction Map	
Timeline	
Budget	
Performance Measures	88
Introduced Species	89
Timeline	
Budget	101
Performance Measures	103
Ecosystem Protection: Impacts from Fishing Activities	105
Timeline	
Budget	
Performance Measures	
Impacts from Vessel Spills	123
Vessel Traffic Recommended Lanes Map	
Timeline	
Budget	
Performance Measures	142
Program Area Action Plans	145

Table of Contents GFNMS Management Plan

Education and Outreach	147
Timeline	
Budget	
Performance Measures	162
Conservation Science	165
Timeline	179
Budget	180
Performance Measures	181
Resource Protection	185
Timeline	
Budget	
Performance Measures	210
Administration	
Staffing Plan	
Timeline	
Budget	
Cross-Cutting Action Plan	233
Introduction	235
Administration and Operations	237
Community Outreach	249
Ecosystem Monitoring	259
Maritime Heritage	273
Northern Management Area Transition Plan	289
Appendix I: Ecosystem Protection Implementation Plan	313
Appendix IA: Estuarine Habitat	
Appendix IB: Open Ocean Habitat	319
Appendix IC: Rocky Shores Habitat	
Appendix ID: Sandy Shores Habitat	323
Appendix II: Program Area Summary Tables	325
Appendix IIA: Education and Outreach	
Appendix IIB: Conservation Science	
Appendix IIC: Resource Protection	
Appendix IID: Administration	
Appendix III: Additional Appendices	
Appendix IIIA: Jurisdictional Authorities	
Appendix IIIB: Glossary of Terms	
Appendix IIIC: Acronyms	
Appendix IIIE: Species List	

Table of Contents GFNMS Management Plan

Appendix IIIF:	Invertebrates and Algae	415
Appendix IIIG:	Introduced Species.	458

EXECUTIVE SUMMARY



SOUTH FARALLON ISLANDS SERVE AS A CRITICAL BREEDING AND FEEDING GROUND FOR MANY SEABIRD AND MARINE MAMMAL POPULATIONS OF THE SANCTUARY. PHOTO: NOAA

Current Status

This document is the Final Management Plan for Gulf of the Farallones National Marine Sanctuary (GFNMS), resulting from a management plan review of the sanctuary, the first since the implementation of its final regulations in 1981. The National Oceanic and Atmospheric Administration (NOAA) has prepared the plan in cooperation with sanctuary staff, the public, state and federal agencies, stakeholders, and the Gulf of the Farallones Sanctuary Advisory Council

GFNMS Designation

GFNMS has been vested with the authority, in accordance with the National Marine Sanctuaries Act (NMSA), to provide comprehensive and coordinated conservation and management of the marine resources extending seaward from the mean high water mark or the seaward boundary of the Point Reyes National Seashore (PRNS). Between Bodega Head and Point Reyes Headlands, the sanctuary extends seaward to 3 nautical miles beyond territorial waters. The sanctuary also includes the waters within 12 nautical miles of Noonday Rock and the mean high water mark on the Farallon Islands, and to the waters between the islands and the mainland from Point Reyes Headlands to Rocky Point. The sanctuary includes Bolinas Bay, Bolinas Lagoon, most of Tomales Bay, Estero Americano, Estero de San Antonio, and Bodega Bay, but not Bodega Harbor. This area of special significance was designated a national marine sanctuary because these waters provide important marine and nearshore habitats for a diverse array of marine mammals and marine birds, as well as fishery, plant, algae, and benthic resources. The marine mammals and seabirds present in abundant numbers on the Farallon Islands and the mainland coast depend as much on the integrity and productivity of these adjacent ocean and estuarine waters as on the preservation of the shore areas they use for breeding, feeding, and hauling out.

Management Plan Review

The 1992 amendments to the NMSA required that each of the national marine sanctuaries engage in a management plan review process every five years to reevaluate site-specific goals and objectives, management techniques, and strategies. The National Marine Sanctuary Program (NMSP) reviewed the management plans of Gulf of the Farallones, Cordell Bank, and Monterey Bay national marine sanctuaries jointly. These sanctuaries are located adjacent to one another, are managed by the same program, and share many of the same resources and issues. In addition, all three sites share overlapping interest and user groups. It has also been more cost effective for the NMSP to review the three sites jointly, rather than conducting three independent reviews.

This management plan review process has provided GFNMS with the opportunity to: take a closer look at how the marine environment has changed over the past twenty years; understand the cause and effect relationship of human activity and natural perturbations on the marine resources; and engage the public in the management decision-making process. As a result of this process, GFNMS is reshaping how it manages the marine resources, from restructuring its program areas to reevaluating its regulations.

GFNMS Original Management Plan

The specific requirements of GFNMS' original management plan were compatible with the overall sanctuary management concepts embodied within the NMSA of 1972 and its implementing regulations (15 CFR, Part 922), which require that a management plan be prepared for each national marine sanctuary.

The original management plan, developed at the time of designation of the sanctuary in 1981, provided guidelines to ensure that all management actions undertaken in the first five years of designation were directed to resolving important issues as a means of meeting sanctuary objectives. Management objectives were considered in three areas: resource protection, interpretation, and research. The management plan also called for promulgation of five regulations or prohibitions.

GFNMS Revised Management Plan

This new GFNMS Final Management Plan is one of three (Volume II of IV) final management plans, including a Final Environmental Impact Statement (FEIS), that comprise the set of proposed regulatory and management actions for the three sanctuaries that have been engaged in the Joint Management Plan Review (JMPR). Although there has been every attempt to coordinate structure and content across the three management plans, each plan reflects the different working groups, make-up of sanctuary advisory councils and sanctuary staff, and site-specific approaches to the management plan review process. Additionally, each of the three sanctuaries has a different history and is in a different stage of its life cycle.

Originally designated in 1981 as the Point Reyes-Farallon Islands Marine Sanctuary, sanctuary management responsibilities were delegated to the California Department of Fish and Game

(CDFG). Historically, the site focused largely on education and public awareness of biologically, culturally, or historically significant underwater resources. The national marine sanctuary program has identified six phases that describe the evolution of a sanctuary from designation to maturation over a period of approximately 10-20 years. The phases include predesignation and designation, start-up and early operations, transition (first management plan review), mature operations, recalibration (second management plan review), and adaptive management. Today, GFNMS is in the transition phase, implementing its first management plan with the support of a staff of twelve and a budget of \$1.4 million, and many new partnerships. The new management plan addresses six priority resource management issues through the three program areas listed below.

The GFNMS revised management plan will guide the operation of the sanctuary for the next five to ten years, helping the sanctuary set budget and project priorities each year in preparation of its annual operating plan. Timelines and annual estimates are presented in this plan to assist staff in the development of the GFNMS annual operating plan; assist the sanctuary advisory council in advising management on priority issues; and help the public to better understand the approximate time frames and costs needed to carry out the strategies and activities presented throughout the plan. The management plan/final environmental impact statement proposes and analyzes regulatory changes and additions.

Nine action plans are contained in the final management plan:

- 1. Water Quality
- 2. Wildlife Disturbance
- 3. Introduced Species
- 4. Ecosystem Protection: Impacts from Fishing Activities
- 5. Vessel Spills
- 6. Education and Outreach
- 7. Conservation Science
- 8. Resource Protection
- 9. Administration

The implementation of the nine action plans within the GFNMS management plan will take place within the framework of the Ecosystem Protection Implementation Plan (Appendix I), which is organized around four key habitats of the sanctuary: estuarine, rocky shores, sandy shores and open ocean. This approach ensures that the sanctuary adequately addresses the priority resource management issues within each key habitat. It also allows sanctuary staff to identify opportunities to collaborate between program areas, focused around priority sanctuary habitats.